VOL 2 No 1 JANUARY 1976 Nos. 13646 - 14747

CURRENT ADVANCES IN ECOLOGICAL SCIENCES

A MONTHLY SUBJECT CATEGORISED LISTING OF TITLES IN ECOLOGICAL SCIENCES COMPILED FROM THE CURRENT LITERATURE

CONTENTS

1. General concepts 1
2. Ecosystem dynamics 2
3. Historical ecology 3
4. Biogeography, distribution 5
5. Systematics 10
6. Sociology 10
7. Population dynamics 12
8. Animal behaviour 15
9. Productivity, growth rates 25
10. Primary production processes 27
11. Predator/prey interactions 27
12. Host/parasite interactions 28
13. Plant/animal interactions 36
14. Competition and interference 41
15. Interactions with microorganisms 42
16. Interactions with soil 45
17. Interactions with the physical environment 46
18. Interactions with man 50
19. Radiation, energy 51
20. Biogeochemical cycles 52
21. Water relations 54
22. Regeneration and reproduction 55
23. Phenology and rhythms 60
24. Disease and injury 61
25. Adaptation (physiological, biochemical, morphological) 65
26. Nutrition 68
27. Genecology 70
28. Autecology 72
29. Micrometeorology 75
30. Artificial environment 76
31. Hydrology 76
32. Soil science 79
33. Litter and humus 83
34. Environmental hazards 84
35. Erosion 85
36. Modelling, statistics 86
37. Regional survey 89
38. Remote sensing 90
39. Land use 91
40. Conservation 93
41. Wildlife management and fish farming 93
42. Pest control 97
43. Pollution 101
44. Tropical ecology 111
45. Aridzone ecology 112
46. Forest ecology 113
47. Shrubland ecology 115
48 Grassland ecology 115
49. Tundra ecology 116
50. Wetland ecology 117
51. Freshwater ecology 117
52. Marine ecology 120
53. Coastal and estuarine ecology 124
54. Soil biology 125
55. Microbial ecology 128
56. Crop ecology 131

Author index 133
Abbreviations to authors' addresses 139

VOL. 2 .976

VOL 2 No 2 FEBRUARY 1976 Nos. 14748 - 15934

CURRENT ADVANCES IN ECOLOGICAL SCIENCES

A MONTHLY SUBJECT CATEGORISED LISTING OF TITLES IN ECOLOGICAL SCIENCES COMPILED FROM THE CURRENT LITERATURE

CONTENTS

1. General concepts 141
2. Ecosystem dynamics 141
3. Historical ecology 142
4. Biogeography, distribution 143
5. Systematics 149
6. Sociology 150
7. Population dynamics 153
8. Animal behaviour 156
9. Productivity, growth rates 166
10. Primary production processes 169
11. Predator/prey interactions 171
12. Host/parasite interactions 173
13. Plant/animal interactions 177
14. Competition and interference 179
15. Interactions with microorganisms 182
16. Interactions with soil 183
17. Interactions with the physical environment 185
18. Interactions with man 188
19. Radiation, energy 190
20. Biogeochemical cycles 192
21. Water relations 194
22. Regeneration and reproduction 195
23. Phenology and rhythms 199
24. Disease and injury 202
25. Adaptation (physiological, biochemical, morphological) 204
26. Nutrition 205
27. Genecology 210
28. Autecology 213
29. Micrometeorology 216
30. Artificial environment 217
31. Hydrology 217
32. Soil science 219
33. Litter and humus 221
34. Environmental hazards 223
35. Erosion 224
36. Modelling, statistics 225
37. Regional survey 227
38. Remote sensing 228
39. Land use 229
40. Conservation 231
41. Wildlife management and fish farming 234
42. Pest control 238
43. Pollution 241
44. Tropical ecology 256
45. Aridzone ecology 256
46. Forest ecology 257
47. Shrubland ecology 259
48. Grassland ecology 260
49. Tundra ecology 261
50. Wetland ecology 261
51. Freshwater ecology 262
52. Marine ecology 266
53. Coastal and estuarine ecology 270
54. Soil biology 273
55. Microbial ecology 275
56. Crop ecology 277

Author index 279

VOL 2 197

VOL 2 No 3 MARCH 1976 Nos. 15935 - 17243

CURRENT ADVANCES IN ECOLOGICAL SCIENCES

A MONTHLY SUBJECT CATEGORISED LISTING OF TITLES IN ECOLOGICAL SCIENCES COMPILED FROM THE CURRENT LITERATURE

CONTENTS

1. General concepts 285
2. Ecosystem dynamics 286
3. Historical ecology 286
4. Biogeography, distribution 287
5. Systematics 293
6. Sociology 294
7. Population dynamics 297
8. Animal behaviour 300
9. Productivity, growth rates 308
10. Primary production processes 313
11. Predator/prey interactions 314
12. Host/parasite interactions 317
13. Plant/animal interactions 323
14. Competition and interference 328
15. Interactions with microorganisms 331
16. Interactions with soil 333
17. Interactions with the physical environment 335
18. Interactions with man 340
19. Radiation, energy 341
20. Biogeochemical cycles 342
21. Water relations 344
22. Regeneration and reproduction 347
23. Phenology and rhythms 352
24. Disease and injury 355
25. Adaptation (physiological, biochemical, morphological) 361
26. Nutrition 365
27. Genecology 372
28. Autecology 375
29. Micrometeorology 377
30. Artificial environment 378
31. Hydrology 379
32. Soil science 382
33. Litter and humus 386
34. Environmental hazards 388
35. Erosion 388
36. Modelling, statistics 389
37. Regional survey 391
38. Remote sensing 392
39. Land use 393
40. Conservation 395
41. Wildlife management and fish farming 395
42. Pest control 399
43. Pollution 406
44. Tropical ecology 418
45. Aridzone ecology 419
46. Forest ecology 420
47. Shrubland ecology 422
48. Grassland ecology 422
49. Tundra ecology 423
50. Wetland ecology 423
51. Freshwater ecology 424
52. Marine ecology 428
53. Coastal and estuarine ecology 433
54. Soil biology 436
55. Microbial ecology 438
56. Crop ecology 443

Author index 444

VOL. 2 1976

VOL 2 No 4 APRIL 1976 Nos. 17244 - 18565

CURRENT ADVANCES IN ECOLOGICAL SCIENCES

A MONTHLY SUBJECT CATEGORISED LISTING OF TITLES IN ECOLOGICAL SCIENCES COMPILED FROM THE CURRENT LITERATURE

CONTENTS

VOL 2 197

Subject sections

1. General concepts ... 451
2. Ecosystem dynamics ... 451
3. Historical ecology ... 452
4. Biogeography, distribution ... 453
5. Systematics ... 456
6. Sociology ... 457
7. Population dynamics ... 458
8. Animal behaviour ... 461
9. Productivity, growth rates ... 470
10. Primary production processes ... 474
11. Predator/prey interactions ... 475
12. Host/parasite interactions ... 477
13. Plant/animal interactions ... 481
14. Competition and interference ... 484
15. Interactions with microorganisms ... 487
16. Interactions with soil ... 489
17. Interactions with the physical environment ... 490
18. Interactions with man ... 494
19. Radiation, energy ... 495
20. Biogeochemical cycles ... 497
21. Water relations ... 499
22. Regeneration and reproduction ... 500
23. Phenology and rhythms ... 504
24. Disease and injury ... 507
25. Adaptation (physiological, biochemical, morphological) ... 511
26. Nutrition ... 514
27. Genecology ... 517
28. Autecology ... 519
29. Micrometeorology ... 522
30. Artificial environment ... 522
31. Hydrology ... 522
32. Soil science ... 523
33. Litter and humus ... 527
34. Environmental hazards ... 527
35. Erosion ... 527
36. Modelling, statistics ... 528
37. Regional survey ... 530
38. Remote sensing ... 531
39. Land use ... 531
40. Conservation ... 532
41. Wildlife management and fish farming ... 532
42. Pest control ... 535
43. Pollution ... 539
44. Tropical ecology ... 547
45. Aridzone ecology ... 547
46. Forest ecology ... 547
47. Shrubland ecology ... 549
48. Grassland ecology ... 549
49. Tundra ecology ... 549
50. Wetland ecology ... 551
51. Freshwater ecology ... 551
52. Marine ecology ... 556
53. Coastal and estuarine ecology ... 558
54. Soil biology ... 560
55. Microbial ecology ... 562
56. Crop ecology ... 566

Author index ... 567

VOL 2 No 5 MAY 1976 Nos. 18566 - 19840

CURRENT ADVANCES IN ECOLOGICAL SCIENCES

A MONTHLY SUBJECT CATEGORISED LISTING OF TITLES IN ECOLOGICAL SCIENCES COMPILED FROM THE CURRENT LITERATURE

CONTENTS

VOL. 2 1976

Subject sections

1. General concepts 573
2. Ecosystem dynamics 573
3. Historical ecology 574
4. Biogeography, distribution 575
5. Systematics 578
6. Sociology 578
7. Population dynamics 580
8. Animal behaviour 581
9. Productivity, growth rates 586
10. Primary production processes 589
11. Predator/prey interactions 590
12. Host/parasite interactions 591
13. Plant/animal interactions 596
14. Competition and interference 599
15. Interactions with microorganisms 601
16. Interactions with soil 603
17. Interactions with the physical environment 605
18. Interactions with man 607
19. Radiation, energy 608
20. Biogeochemical cycles 610
21. Water relations 611
22. Regeneration and reproduction.... 612
23. Phenology and rhythms 615
24. Disease and injury 617
25. Adaptation (physiological, biochemical, morphological) 621
26. Nutrition 624
27. Genecology 626
28. Autecology 629
29. Micrometeorology 631
30. Artificial environment 632
31. Hydrology 632
32. Soil science 633
33. Litter and humus 638
34. Environmental hazards 639
35. Erosion 639
36. Modelling, statistics 640
37. Regional survey 642
38. Remote sensing 642
39. Land use 642
40. Conservation 644
41. Wildlife management and fish farming 645
42. Pest control 647
43. Pollution 650
44. Tropical ecology 661
45. Aridzone ecology 662
46. Forest ecology 662
47. Shrubland ecology 664
48. Grassland ecology 664
49. Tundra ecology 665
50. Wetland ecology 665
51. Freshwater ecology 665
52. Marine ecology 668
53. Coastal and estuarine ecology 671
54. Soil biology 671
55. Microbial ecology 673
56. Crop ecology 677

Author index 679

VOL 2 No 6 JUNE 1976 Nos. 19841 - 21116

CURRENT ADVANCES IN ECOLOGICAL SCIENCES

A MONTHLY SUBJECT CATEGORISED LISTING OF TITLES IN ECOLOGICAL SCIENCES COMPILED FROM THE CURRENT LITERATURE

CONTENTS

VOL 2 197

Subject sections

1. General concepts 685
2. Ecosystem dynamics 685
3. Historical ecology 686
4. Biogeography, distribution 687
5. Systematics 690
6. Sociology 690
7. Population dynamics 692
8. Animal behaviour 694
9. Productivity, growth rates 702
10. Primary production processes 704
11. Predator/prey interactions 705
12. Host/parasite interactions 706
13. Plant/animal interactions 711
14. Competition and interference 714
15. Interactions with microorganisms 716
16. Interactions with soil 717
17. Interactions with the physical environment 719
18. Interactions with man 720
19. Radiation, energy 722
20. Biogeochemical cycles 724
21. Water relations 725
22. Regeneration and reproduction 726
23. Phenology and rhythms 729
24. Disease and injury 731
25. Adaptation (physiological, biochemical, morphological) 735
26. Nutrition 737
27. Genecology 739
28. Autecology 741
29. Micrometeorology 743
30. Artificial environment 744
31. Hydrology 744
32. Soil science 745
33. Litter and humus 749
34. Environmental hazards 749
35. Erosion 750
36. Modelling, statistics 751
37. Regional survey 752
38. Remote sensing 753
39. Land use 753
40. Conservation 755
41. Wildlife management and fish farming 757
42. Pest control 760
43. Pollution 766
44. Tropical ecology 775
45. Aridzone ecology 776
46. Forest ecology 776
47. Shrubland ecology 777
48. Grassland ecology 777
49. Tundra ecology 778
50. Wetland ecology 778
51. Freshwater ecology 779
52. Marine ecology 781
53. Coastal and estuarine ecology 784
54. Soil biology 785
55. Microbial ecology 788
56. Crop ecology 791

Author index 793

VOL 2 No 7 JULY 1976 Nos. 21117-22187

CURRENT ADVANCES IN ECOLOGICAL SCIENCES

A MONTHLY SUBJECT CATEGORISED LISTING OF TITLES IN ECOLOGICAL SCIENCES COMPILED FROM THE CURRENT LITERATURE

CONTENTS

VOL.
2
1976

Subject sections

1. General concepts 799
2. Ecosystem dynamics 799
3. Historical ecology 800
4. Biogeography, distribution 801
5. Systematics 803
6. Sociology 804
7. Population dynamics 805
8. Animal behaviour 807
9. Productivity, growth rates 815
10. Primary production processes 817
11. Predator/prey interactions 819
12. Host/parasite interactions 819
13. Plant/animal interactions 822
14. Competition and interference 823
15. Interactions with microorganisms 825
16. Interactions with soil 826
17. Interactions with the physical environment 827
18. Interactions with man 829
19. Radiation, energy 830
20. Biogeochemical cycles 832
21. Water relations 833
22. Regeneration and reproduction 834
23. Phenology and rhythms 837
24. Disease and injury 840
25. Adaptation (physiological, biochemical, morphological) 842
26. Nutrition 844
27. Genecology 846
28. Autecology 849
29. Micrometeorology 851
30. Artificial environment 852
31. Hydrology 853
32. Soil science 855
33. Litter and humus 859
34. Environmental hazards 860
35. Erosion 861
36 Modelling, statistics 862
37. Regional survey 864
38. Remote sensing 864
39. Land use 865
40. Conservation 866
41. Wildlife management and fish farming 867
42. Pest control 870
43. Pollution 872
44. Tropical ecology 879
45. Aridzone ecology 880
46. Forest ecology 880
47. Shrubland ecology 881
48. Grassland ecology 882
49. Tundra ecology 882
50. Wetland ecology 882
51. Freshwater ecology 883
52. Marine ecology 885
53. Coastal and estuarine ecology 887
54. Soil biology 888
55. Microbial ecology 890
56. Crop ecology 893

Author index 895
Abbreviations to Authors' Addresses 899

VOL 2 No 8 AUGUST 1976 Nos. 22188 - 23179

CURRENT ADVANCES IN ECOLOGICAL SCIENCES

A MONTHLY SUBJECT CATEGORISED LISTING OF TITLES IN ECOLOGICAL SCIENCES COMPILEDFROM THE CURRENT LITERATURE

CONTENTS

VOL 2 197

Subject sections

1. General concepts 901
2. Ecosystem dynamics 901
3. Historical ecology 901
4. Biogeography, distribution 902
5. Systematics 904
6. Sociology 904
7. Population dynamics 906
8. Animal behaviour 908
9. Productivity, growth rates 915
10. Primary production processes 918
11. Predator/prey interactions 919
12. Host/parasite interactions 920
13. Plant/animal interactions 923
14. Competition and interference 925
15. Interactions with microorganisms 927
16. Interactions with soil 928
17. Interactions with the physical environment 928
18. Interactions with man 931
19. Radiation, energy 931
20. Biogeochemical cycles 933
21. Water relations 934
22. Regeneration and reproduction 935
23. Phenology and rhythms 937
24. Disease and injury 940
25. Adaptation (physiological, biochemical, morphological) 943
26. Nutrition 945
27. Genecology 947
28. Autecology 948
29. Micrometeorology 950
30. Artificial environment 950
31. Hydrology 951
32. Soil science 953
33. Litter and humus 956
34. Environmental hazards 957
35. Erosion 958
36. Modelling, statistics 958
37. Regional survey 960
38. Remote sensing 960
39. Land use 961
40. Conservation 962
41. Wildlife management and fish farming 963
42. Pest control 965
43. Pollution 968
44. Tropical ecology 976
45. Aridzone ecology 976
46. Forest ecology 977
47. Shrubland ecology 978
48. Grassland ecology 978
49. Tundra ecology 978
50. Wetland ecology 979
51. Freshwater ecology 979
52. Marine ecology 982
53. Coastal and estuarine ecology 983
54. Soil biology 985
55. Microbial ecology 986
56. Crop ecology 988

Author index 990

VOL 2 No 9 SEPTEMBER 1976 Nos. 23181-24075

CURRENT ADVANCES IN ECOLOGICAL SCIENCES

A MONTHLY SUBJECT CATEGORISED LISTING OF THE TITLES IN ECOLOGICAL SCIENCES COMPILED FROM THE CURRENT LITERATURE

CONTENTS

VOL.
2
1976

Subject sections

1. General concepts 995
2. Ecosystem dynamics 995
3. Historical ecology 995
4. Biogeography, distribution 996
5. Systematics 999
6. Sociology 999
7. Population dynamics 1000
8. Animal behaviour 1001
9. Productivity, growth rates 1007
10. Primary production processes 1008
11. Predator/prey interactions 1008
12. Host/parasite interactions 1009
13. Plant/animal interactions 1011
14. Competition and interference 1015
15. Interactions with microorganisms 1016
16. Interactions with soil 1018
17. Interactions with the physical environment 1020
18. Interactions with man 1022
19. Radiation, energy 1023
20. Biogeochemical cycles 1024
21. Water relations 1024
22. Regeneration and reproduction 1025
23. Phenology and rhythms 1027
24. Disease and injury 1029
25. Adaptation (physiological, biochemical, morphological) 1031
26. Nutrition 1032
27. Genecology 1035
28. Autecology 1036
29. Micrometeorology 1038
30. Artificial environment 1038
31. Hydrology 1039
32. Soil science 1039
33. Litter and humus 1043
34. Environmental hazards 1043
35. Erosion 1043
36. Modelling, statistics 1044
37. Regional survey 1045
38. Remote sensing 1045
39. Land use 1046
40. Conservation 1047
41. Wildlife management and fish farming 1048
42. Pest control 1049
43. Pollution 1051
44. Tropical ecology 1058
45. Aridzone ecology 1059
46. Forest ecology 1059
47. Shrubland ecology 1060
48. Grassland ecology 1061
49. Tundra ecology 1061
50. Wetland ecology 1062
51. Freshwater ecology 1062
52. Marine ecology 1063
53. Coastal and estuarine ecology 1065
54. Soil biology 1066
55. Microbial ecology 1069
56. Crop ecology 1072

Author index 1073

VOL 2 No 10 OCTOBER 1976 Nos. 24076 - 25615

CURRENT ADVANCES IN ECOLOGICAL SCIENCES

A MONTHLY SUBJECT CATEGORISED LISTING OF TITLES IN ECOLOGICAL SCIENCES COMPILED FROM THE CURRENT LITERATURE

CONTENTS

Subject sections

1. General concepts 1077
2. Ecosystem dynamics 1077
3. Historical ecology 1078
4. Biogeography, distribution 1079
5. Systematics 1083
6. Sociology 1084
7. Population dynamics 1086
8. Animal behaviour 1089
9. Productivity, growth rates 1100
10. Primary production processes 1104
11. Predator/prey interactions 1105
12. Host/parasite interactions 1107
13. Plant/animal interactions 1111
14. Competition and interference 1114
15. Interactions with microorganisms 1117
16. Interactions with soil 1118
17. Interactions with the physical environment 1120
18. Interactions with man 1123
19. Radiation, energy 1125
20. Biogeochemical cycles 1127
21. Water relations 1129
22. Regeneration and reproduction 1131
23. Phenology and rhythms 1136
24. Disease and injury 1138
25. Adaptation (physiological, biochemical, morphological) 1140
26. Nutrition 1143
27. Genecology 1147
28. Autecology 1150
29. Micrometeorology 1154
30. Artificial environment 1155
31. Hydrology 1156
32. Soil science 1157
33. Litter and humus 1161
34. Environmental hazards 1161
35. Erosion 1162
36. Modelling, statistics 1163
37. Regional survey 1165
38. Remote sensing 1166
39. Land use 1167
40. Conservation 1170
41. Wildlife management and fish farming 1171
42. Pest control 1174
43. Pollution 1177
44. Tropical ecology 1187
45. Aridzone ecology 1187
46. Forest ecology 1188
47. Shrubland ecology 1192
48. Grassland ecology 1192
49. Tundra ecology 1193
50. Wetland ecology 1193
51. Freshwater ecology 1194
52. Marine ecology 1198
53. Coastal and estuarine ecology 1201
54. Soil biology 1202
55. Microbial ecology 1204
56. Crop ecology 1208

Author index 1209

VOL 2 197

VOL 2 No 11 NOVEMBER 1976 Nos. 25616 - 26800

CURRENT ADVANCES IN ECOLOGICAL SCIENCES

A MONTHLY SUBJECT CATEGORISED LISTING OF TITLES IN ECOLOGICAL SCIENCES COMPILED FROM THE CURRENT LITERATURE

CONTENTS

VOL. 2 1976

Subject sections

1. General concepts 1215
2. Ecosystem dynamics 1215
3. Historical ecology 1216
4. Biogeography, distribution 1217
5. Systematics 1221
6. Sociology 1221
7. Population dynamics 1223
8. Animal behaviour 1226
9. Productivity, growth rates 1235
10. Primary production processes 1238
11. Predator/ prey interactions 1239
12. Host/ parasite interactions 1240
13. Plant/ animal interactions 1244
14. Competition and interference 1247
15. Interactions with microorganisms 1249
16. Interactions with soil 1250
17. Interactions with the physical environment 1251
18. Interactions with man 1254
19. Radiation, energy 1255
20. Biogeochemical cycles 1257
21. Water relations 1259
22. Regeneration and reproduction 1260
23. Phenology and rhythms 1264
24. Disease and injury 1265
25. Adaptation (physiological, biochemical, morphological) 1267
26. Nutrition 1269
27. Genecology 1272
28. Autecology 1275
29. Micrometeorology 1278
30. Artificial environment 1278
31. Hydrology 1279
32. Soil science 1279
33. Litter and humus 1282
34. Environmental hazards 1282
35. Erosion 1283
36. Modelling, statistics 1283
37. Regional survey 1285
38. Remote sensing 1285
39. Land use 1286
40. Conservation 1287
41. Wildlife management and fish farming 1288
42. Pest control 1290
43. Pollution 1292
44. Tropical ecology 1300
45. Aridzone ecology 1301
46. Forest ecology 1301
47. Shrubland ecology 1302
48. Grassland ecology 1302
49. Tundra ecology 1303
50. Wetland ecology 1303
51. Freshwater ecology 1304
52. Marine ecology 1306
53. Coastal and estuarine ecology 1309
54. Soil biology 1311
55. Microbial ecology 1313
56. Crop ecology 1316

Author index 1317

VOL 2 No.12 DECEMBER 1976 Nos. 26801 - 28032

CURRENT ADVANCES IN ECOLOGICAL SCIENCES

A MONTHLY SUBJECT CATEGORISED LISTING OF TITLES IN ECOLOGICAL SCIENCES COMPILED FROM THE CURRENT LITERATURE

CONTENTS

1. General concepts 1321
2. Ecosystem dynamics 1321
3. Historical ecology 1321
4. Biogeography, distribution 1323
5. Systematics 1327
6. Sociology 1327
7. Population dynamics 1330
8. Animal behaviour 1333
9. Productivity, growth rates 1339
10. Primary production processes 1342
11. Predator/prey interactions 1343
12. Host/parasite interactions 1345
13. Plant/animal interactions 1349
14. Competition and interference 1352
15. Interactions with microorganisms 1354
16. Interactions with soil 1356
17. Interactions with the physical environment 1357
18. Interactions with man 1361
19. Radiation, energy 1362
20. Biogeochemical cycles 1364
21. Water relations 1366
22. Regeneration and reproduction 1367
23. Phenology and rhythms 1370
24. Disease and injury 1373
25. Adaptation (physiological, biochemical, morphological) 1378
26. Nutrition 1380
27. Genecology 1383
28. Autecology 1385
29. Micrometeorology 1388
30. Artificial environment 1390
31. Hydrology 1390
32. Soil science 1391
33. Litter and humus 1395
34. Environmental hazards 1395
35. Erosion 1396
36. Modelling, statistics 1397
37. Regional survey 1400
38. Remote sensing 1400
39. Land use 1401
40. Conservation 1401
41. Wildlife management and fish farming 1402
42. Pest control 1404
43. Pollution 1408
44. Tropical ecology 1417
45. Aridzone ecology 1417
46. Forest ecology 1418
47. Shrubland ecology 1420
48. Grassland ecology 1420
49. Tundra ecology 1420
50. Wetland ecology 1421
51. Freshwater ecology 1421
52. Marine ecology 1426
53. Coastal and estuarine ecology 1428
54. Soil biology 1430
55. Microbial ecology 1432
56. Crop ecology 1435

Author index 1436

VOL 2 197